

WEST

Generate Collection

Print

L7: Entry 6 of 8

File: USPT

Mar 19, 2002

DOCUMENT-IDENTIFIER: US 6357171 B1

TITLE: Method for aerial distribution of pollinating agents

Brief Summary Text (9):

While the concept of successfully distributing pollinating agents by aerial means is novel and new, the literature has examples of methods for the distribution of biological control agents (parasite/predator insects) by various means including aerial. Maedgen (U.S. Pat. No. 4,260,108) first taught the simple "airborne release and broadcast of loose parasite/predator insect eggs for biological control of insect pests." Show U.S. Pat. No. 4,966,329) advanced the art by distributing predatory mites in a carrier material that required the adequate mixing of the materials and subsequent blowing the particulate/mite mixture on to plants. Tedders (U.S. Pat. No. 5,484,504) introduced another form of carrier for predaceous insects in the form of a string with attached eggs that could be cut "in predetermined lengths to be manually placed on individual plants." Most recently, Carter (U.S. Pat. No. 5,996,276) teaches the use of a biodegradable delivery device (a container) for dispersing biocontrol agents into a field by aerial means. The throwing tool is a mechanical device similar to those used in casting clay pigeons for skeet target practice; the delivery device, a hollow clay pigeon. The biological control agents are described as means to biologically control insect pests as an alternative to chemical insecticides, a desirable benefit in the health-conscious marketplace. The preferred embodiment describes an aerodynamic, biodegradable saucer shaped delivery device containing parasitic wasps. A variety of suitable biological control agents are listed for such deployment, "Lygus hesperus, parasitic wasps such as Aphaelinus nr. paramali, lacewing eggs, parasitic or predaceous mites and spiders, nematodes, and viral or bacterial agents." None of the above teachings nor any of their incorporated references suggest, whether taken singly or in combination, the deployment of anything other than biological control agents for the control of insect pests in crops.

Detailed Description Text (6):

Nesting tubes are not a critical component to the delivery device in all cases, they assists in keeping some solitary pollinator in the target area by providing a ready and convenient nesting site while encouraging a rapid start to pollination activities which provide the supplies for nest building. Other solitary and other non-social pollinators like some flies will seek out nearby natural habitats. The use of the nesting tubes in this example of a delivery device is that of a feature and not a critical element of the aerial pollination method specification. Another feature within this context would be the old-fashion artillery shell shape of the delivery device. This shape is a proven, simple design that has an excellent capacity for stable flight and target acquisition. Examples of enhancement features to improve the aerodynamics characteristics and targeting ability are adding a rifling sabot for rotation when propelled or stabilizing fins when dropped. Another feature that could be employed would be means to control the final resting attitude of the delivery device upon landing. By engineering the exterior shape to facilitate how the delivery device comes to rest, features like the open exposure and subsequent access to the nesting tube entrances can be assured. Use of the weighted nosepiece virtually assures the delivery device lands nose down and topple over on to its side as designed. The delivery device is essentially nothing more than a container conveying the pollinators through the air to a selected landing site. A key requirement is that it keeps the pollination agents together and protected during the aerial trip. The shape and internal structures could be any of a number

of interacting geometric forms including by way of example a circular ring, cone, cube, cylinder, disc, ellipsoid, frustum, hemisphere, paraboloid, parallelepiped, prism, pyramid, rectangular prism, sphere, spheroid and combinations thereof that provide sufficient structural strength and cohesion to survive the deployment.

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 1 of 1 returned.**☐ 1. Document ID: US 20030056427 A1

L4: Entry 1 of 1

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030056427

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030056427 A1

TITLE: Biological control of horn flies

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Daffunchio, Julio Angel	Buenos Aires		AR	
Palazzo, Eduardo Abel	Buenos Aires		AR	

US-CL-CURRENT: 43/124

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWOC
Draw Desc	Image										

[Generate Collection](#)[Print](#)

Term	Documents
BIOCONTROL.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	891
BIOCONTROLS.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	6
(2 AND BIOCONTROL).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	1
(L2 AND "BIOCONTROL").USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	1

Display Format:

-

[Change Format](#)[Previous Page](#)[Next Page](#)

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 1 of 1 returned.**☐ 1. Document ID: US 20030056427 A1

L4: Entry 1 of 1

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030056427

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030056427 A1

TITLE: Biological control of horn flies

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Daffunchio, Julio Angel	Buenos Aires		AR	
Palazzo, Eduardo Abel	Buenos Aires		AR	

US-CL-CURRENT: 43/124

Full	Title	CIT.1	REV.1	CLS.1	REF.1	SEQ.1	ATT.1		
RAW.1									

[Generate Collection](#)[Print](#)

Term	Documents
BIOCONTROL.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	891
BIOCONTROLS.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	6
(2 AND BIOCONTROL).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	1
(L2 AND "BIOCONTROL").USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	1

Display Format:

-

[Change Format](#)[Previous Page](#)[Next Page](#)

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 8 of 8 returned.**☐ 1. Document ID: US 20030056427 A1

L7: Entry 1 of 8

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030056427

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030056427 A1

TITLE: Biological control of horn flies

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Daffunchio, Julio Angel	Buenos Aires		AR	
Palazzo, Eduardo Abel	Buenos Aires		AR	

US-CL-CURRENT: 43/124

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
Draw Desc	Image										

☐ 2. Document ID: US 20030005484 A1

L7: Entry 2 of 8

File: PGPB

Jan 2, 2003

PGPUB-DOCUMENT-NUMBER: 20030005484

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030005484 A1

TITLE: Microbiocidal and pesticidal aromatic aldehydes

PUBLICATION-DATE: January 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Crandall, Bradford G. JR.	Davis	CA	US	
Emerson, Ralph W.	Davis	CA	US	

US-CL-CURRENT: 800/279; 514/532, 514/570, 514/701, 514/730

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
Draw Desc	Image										

☐ 3. Document ID: US 20020146394 A1

L7: Entry 3 of 8

File: PGPB

Oct 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020146394
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020146394 A1

TITLE: Mycoattractants and mycopesticides

PUBLICATION-DATE: October 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Stamets, Paul Edward	Shelton	WA	US	

US-CL-CURRENT: 424/93.5; 424/195.15

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
Draw Desc	Image										

☐ 4. Document ID: US 20020099101 A1

L7: Entry 4 of 8

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020099101
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020099101 A1

TITLE: Use of flavonoid aldehydes as pesticides

PUBLICATION-DATE: July 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Emerson, Ralph W.	Davis	CA	US	
Crandall, Bradford G. JR.	Davis	CA	US	

US-CL-CURRENT: 514/729; 514/693, 514/701

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
Draw Desc	Image										

☐ 5. Document ID: US 6551795 B1

L7: Entry 5 of 8

File: USPT

Apr 22, 2003

US-PAT-NO: 6551795
DOCUMENT-IDENTIFIER: US 6551795 B1

TITLE: Nucleic acid and amino acid sequences relating to pseudomonas aeruginosa for diagnostics and therapeutics

DATE-ISSUED: April 22, 2003

INVENTOR-INFORMATION:

US-CL-CURRENT: 435/69.1; 435/253.3, 435/320.1, 435/325, 435/6, 536/23.1, 536/23.7

☐ 6. Document ID: US 6357171 B1

Mar 19, 2002

NAME	CITY	STATE	ZIP CODE	COUNTRY
Harper; William A.	Redmond	WA	98052-4492	

US-CL-CURRENT: 47/1.41; 449/1

☐ 7. Document ID: US 5799607 A

Sep 1, 1998

NAME	CITY	STATE	ZIP CODE	COUNTRY
Greany; Patrick D.	Gainesville	FL		
Carpenter; James E.	Tifton	GA		

US-CL-CURRENT: 119/6.5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMC

☐ 8. Document ID: US 5512280 A

L7: Entry 8 of 8

File: USPT

Apr 30, 1996

US-PAT-NO: 5512280

DOCUMENT-IDENTIFIER: US 5512280 A

TITLE: Maintenance and long term stabilization of fungal conidia using surfactants

DATE-ISSUED: April 30, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johal; Sarjit S.	Hopkinton	MA		
Marold; Lorraine M.	Worcester	MA		

US-CL-CURRENT: 424/93.5; 435/254.1, 435/260

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw	Desc	Image							

KWWC

[Generate Collection](#)[Print](#)

Term	Documents
FLY.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	74515
FLIES.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	16986
FLYS.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	489
(6 AND FLY).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	8
(L6 AND "FLY").USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	8

Display Format:

-

[Change Format](#)[Previous Page](#)[Next Page](#)



About the Programs

- ▶ [The Big Picture of ARS Research](#)
- ▶ [2002 & 2003 Performance Plan](#)
- ▶ [2001 ARS Annual Performance Report](#)
- ▶ [ARS Strategic Plan 1997 - 2002 Working Document](#)
- ▶ [About this Web Site](#)
- ▶ [Search Help](#)
- ▶ [NPS Staff Directory](#)

Search

- ☐ National Programs Site
- ☐ Patents ☐ Projects
- ☐ People ☐ Programs
- ☐ Locations ☐ News
- ☐ Publications
- ☐ All ARS Web Sites
- ☒ Use thesaurus

[More Search Options...](#)

News

Tillage Affects Tire Needs

Study Investigates Health Benefits of Barley

[list all >>](#)

Calendar

NPS Customer/Stakeholder outreach

- ▶ [ARS Poultry Research Strategic Planning](#) (04/15/03)
- ▶ [Planning and Coordination Workshop](#) (03/11/03)
- ▶ [Sorghum Research Workshop](#) (02/19/03)
- ▶ [NP106 National program planning workshop](#) (11/20/02)

Related Information

Links:

- ▶ [ARS Research in Biobased Products & BioEnergy](#)

Honey Boosts Beneficial Wasps

[ARS Information Staff](#) | [Latest ARS News](#) | [Latest Version](#)

STORY LEAD: Honey Boosts Effectiveness of Parasitic Wasps

ARS News Service Agricultural Research Service, USDA Jim Core, 2002

Feeding honey to a parasitic wasp from Brazil helps it attack pest fly. Research Service scientists and cooperators report.

ARS scientists at the Center for Medical, Agricultural and Veterinary Research at the University of Campinas in Brazil are evaluating the Brazilian wasp from that country that may be biocontrol candidates against flies in the United States.

Certain parasitic wasps native to the United States are now used to control flies on livestock and poultry farms and transport disease-causing organisms. The wasps are used at the ARS lab in Gainesville. The parasitic wasps reduce insecticide use. Farmers can buy native parasitic wasps from commercial insectaries.

But the effectiveness of native parasitic wasps is limited, because they lay fewer pupae. One foreign wasp species being evaluated (*Tachinaephagus*) used together, the native and parasitic wasps could attack flies in the fly control.

Unlike native wasps, however, foreign wasps do not derive energy from honey. The researchers found that feeding the wasps honey tripled the amount of progeny developing in flies.

The Gainesville and Brazilian researchers also discovered that honeybees ward off a debilitating new disease transmitted from feral swarms. The bees develop into adults and lay substantially more male eggs--a real barrier to the disease.

A detailed story about this research appears in the August issue of *Agricultural Research Service News* at <http://www.ars.usda.gov/is/AR/archive/aug02/flies0802.htm>

ARS is the chief scientific research agency of the U.S. Department of Agriculture.

* This is one of the news reports that ARS Information distributes to the public.
 * Start, stop or change an e-mail subscription at <http://www.ars.usda.gov/is/pr/thelatest.htm> * NewsService@ars.usda.gov
 504-1638 | fax (301) 504-1648

- ▶ [Booklet for FAIR 2002: Food Animal Integrated Research - an agenda for research and education](#)
- ▶ [Summary of the USDA Stakeholder Workshop for Animal Agriculture, November 2001](#)
- ▶ [REE Directory](#)
- ▶ [British Mycological Society, International Symposium on Bioactive Fungal Metabolites](#)
- ▶ [ARS Office of Scientific Quality Review](#)
- ▶ [Food Safety Conference](#)
- ▶ [Beef Home Page](#)

[list all>>](#)

National Program Staff
5601 Sunnyside Ave
Beltsville, MD 20705-5134

Email the
[webmaster](#)

Site Updated Daily

[Accessibility](#)
[Nondiscrimination Statement](#)
[System Usage Policy](#)
[Endorsement Disclaimer](#)
[USDA Privacy Policy](#)

nbrowser version: 4.75
ip: 63.71.228.3


DOGPILE

Dogpile searches these sites: Google, Overture, Ask Jeeves, Looksmart, Inktomi, About, FindWhat, FAST

Web | Images | Shopping | Audio | Multimedia | News | Files | Message Boards
Search engine: Dogpile Picks found 1 results. The query sent was wasps and flies and biocontrol

1. Insects, Wasps, Bees

Animal Kingdom Collection 1 Learn all about insects, and more. <http://www.zane.com/>

Search engine: Google found 10 results. The query sent was wasps and flies and biocontrol

1. Biocontrol research centers on stable flies

... Some girl wasps just wanna kill flies. And that fact may eventually bring livestock producers a bit according to researchers at the ... http://beef-mag.com/ar/beef_biocontrol_research_centers/

2. France-Based Lab Plays Key Role in US Biocontrol Research / April ...

France-Based Lab Plays Key Role in US Biocontrol Research. By Jan Suszkiw April 17, 2001 Parasitic and bacteria abound at the Agricultural ... <http://www.ars.usda.gov/is/pr/2001/010417.htm>

3. Scientists in Montpellier are Exploring the World for Biocontrol ...

... Female flies lay their eggs inside the wheat ... an ARS cooperater in Sidney, Montana, biocontrol Hymenopterous wasps from Eurasia top the list of ... <http://www.ars.usda.gov/is/AR/archive/apr01/>

4. Tutorial

... Gradual metamorphosis is typical of true bugs and grasshoppers; complete metamorphosis is typ moths, and wasps. ... <http://www.nysaes.cornell.edu/ent/biocontrol/info/primer.html>

5. Beneficial Insects Part 2 - Parasitoids

... sheet: http://www.nysaes.cornell.edu/ent/biocontrol/parasitoids/pholetesor_ornigis.html. Family Wasps. Parasitic on dung flies and filth ... http://paipm.cas.psu.edu/BenefInsects/beneficials_Parast

6. ARS News: Honey Boosts Beneficial Wasps

... effort to screen exotic wasp species from that country that may be biocontrol candidates against States. Certain parasitic wasps native to ... <http://www.nps.ars.usda.gov/menu.htm?newsid=1937>

7. Lethbridge Research Centre - Kevin Floate Page

... of natural enemies that are being, or have been, studied as biological control agents for these flie Agents. Parasitic wasps, Predaceous beetles, ... http://res2.agr.ca/lethbridge/scitech/kdf/bioagent_

8. Lethbridge Research Centre Report - Mar. 29, 2001 Page

... Wolbachia, to boost their biocontrol efforts against stable fly, a harmful pest of cattle. Beneficial biological control of flies in feedlots ... http://res2.agr.ca/lethbridge/rep2001/rep0329_e.htm

9. General Concepts of Biological Control

... Potential biocontrol agents are imported to the new location of the pest and released ... The major that are parasitoids: wasps, flies, some beetles ... <http://extension.usu.edu/publica/gardpubs/ipm0>

10. NCSU: ENT/ort-103 BIOCONTROL IN CLOSED SYSTEMS

... task of setting up a biocontrol program for a ... sometimes expended uselessly against shore flies aphids infected with Aphytis wasps are resistant ...

<http://www.ces.ncsu.edu/depts/ent/notes/O&T/production/note103.html>

[Go to Google for more results](#)

Search engine: Overture found 5 results. The query sent was wasps and flies and biocontrol

1. Biocontrol research centers on stable flies

Pesky stable flies may have met their match. Researchers at the University of Nebraska-Lincoln and Research Service are testing tiny parasitic roundworms as biological control agents. They want to de roundworms, ... <http://www.beef-mag.com>

2. Honey Boosts Effectiveness of Parasitic Wasps / August 19, 2002 / News from the USDA Agriculture Information Staff, Agricultural Research Service, USDA. Communicating news and information about <http://www.ars.usda.gov>

3. Western Producer - Male wasps 'a waste of energy', May 17, 2001

May 17, 2001 Male wasps 'a waste of energy' By Mary MacArthur Camrose bureau A Lethbridge ente eliminate males. "Males are unnecessary," says Kevin Floate, who is talking about small parasitic wa flies in <http://www.producer.com>

4. eLibrary.com - M2 PressWIRE 08-19-2002, 'US ARS: Honey boosts effectiveness of parasitic wasp eLibrary is the subscription based online library for fun or research. Find out more about securing yc 7-day trial with your credit card and retrieve 'eLibrary.com - M2 PressWIRE 08-19-2002, 'US ARS: H effectiveness of ... <http://ask.elibrary.com>

5. Honey Boosts Effectiveness of Parasitic Wasps

Click Here for Secure On-line Order Form Supreme Neem Oil 100% Pure Neem Oil, 1600 ppm Azadii choice with order: Perennial Sweet Pea, Royal Oakleaf Lettuce, Autumn Beauty Sunflower or Genove is Back! <http://www.ghorganics.com>

Search engine: Ask Jeeves found 1 results. The query sent was wasps and flies and biocontrol

1. Chalcidoidea (chalcid wasps) Home Page

Arthropods Associated with Livestock Dung This web site is intended to provide current information biology and literature of Chalcidoidea, commonly known as chalcid parasitic wasps. Part of the site i provide... <http://res2.agr.ca/ecorc/apss/chalhome.htm>

[Go to Ask Jeeves for more results](#)

Search engine: Te ma f und 10 results. The query sent was wasps and flies and biocontrol

1. [A Company Dedicated To Fighting Flies Naturally](#)

Most horse owners have given up on controlling pesky, disease-carrying flies. The problem can seem waste of time. Not any more! <http://www.happyhooves.com/aboutus.htm>

2. [How Fly Parasites Control Flies](#)

View the five stages of a fly's lifecycle and how fly parasites disrupt the cycle and can be used as an program. http://www.happyhooves.com/cycle_large.htm

3. [Trouble in paradise? 'Natural' pest control requires careful](#)

Parasitic wasps and flies have been introduced to Hawaii at least 122 times over the last 100 years : in a war against... http://www.eurekalert.org/pub_releases/2001-08/aaft-tip080901.php

4. [Biocontrol research centers on stable flies](#)

Some girl wasps just wanna kill flies. And that fact may eventually bring livestock producers a bioco according to... http://beef-mag.com/ar/beef_biocontrol_research_centers/index.htm

5. [France-Based Lab Plays Key Role in U.S. Biocontrol Research / April](#)

France-Based Lab Plays Key Role in U.S. Biocontrol Research. By Jan Suszkiw April 17, 2001. Parasi and bacteria abound at... <http://www.ars.usda.gov/is/pr/2001/010417.htm>

6. [USDA, ARS, CMAVE, Mosquito and Fly Research Unit Achievements](#)

...and control of microsporidian disease in commercially produced parasitic wasps that are used for l of house flies. <http://cmave.usda.ufl.edu/~mosqfly/achievements.htm>

7. [USDA, ARS, CMAVE, Mosquito and Fly Research Unit Technology Transfer](#)

Dispersal of Stable Flies: Phenology of Dispersing Flies. ... Triple whammy of chemicals, lime and pa bring relief to people... http://cmave.usda.ufl.edu/~mosqfly/new_page_3.htm

8. [Biocontrol](#)

Some of the most effective biocontrol agents are small parasitic wasps and flies. They lay their eggs insect pests. <http://www.waite.adelaide.edu.au/school/Pests/biocont.html>

9. [CABI - Biocontrol News and Information 19\(4\) December 1999 News -](#)


...florets whose pollen and nectar attract large numbers of bees, wasps, flies and butterflies. ... Root Could Biocontrol Replace... <http://pest.cabweb.org/Journals/BNI/Bni19-4/GENNEWS.HTM>

10. [2002 Index](#)

23 Biobased industrial products from ARS, Apr-2, 16 Biocompetitive exclusion, Jan-18 Biocontrol --c Aug-10 --of melaleuca... <http://www.ars.usda.gov/is/AR/archive/dec02/index1202.htm>

[Go to Teoma for more results](#)

Fetch Search the next 10 engines

 Find results for "[wasps and flies and biocontrol](#)" on the [Yellow Pages](#)!

• Click Here to buy [wasps and flies and biocontrol](#)

DOGPILE

[Yellow Pages](#) | [White Pages](#)

[Submit](#)

[About Dogpile](#) | [About Results](#) | [Contact Us](#) | [Terms of Use](#) | [Privacy Policy](#)
[Submit Your Site](#) | [Tools & Tips](#)

POWERED BY **InfoSpace INC**

[About InfoSpace](#) | [Press Room](#) | [Careers](#)

Discover what you can do.™

© 2003 InfoSpace, Inc. InfoSpace, the InfoSpace logo, Discover what you can do, and related marks are trademarks of InfoSpace, Inc. All other marks are the property of their respective owners. All rights reserved.